## **DATASHEET - NZMB2-4-A300/200**



Circuit-breaker, 4p, 300A, 200A in 4th pole

Part no. NZMB2-4-A300/200 Catalog No. 107583



Similar to illustration

elivery program			
oduct range			Circuit-breaker
otective function			System and cable protection
andard/Approval			IEC
stallation type			Fixed
elease system			Thermomagnetic release
onstruction size			NZM2
escription			Set value in neutral conductor is synchronous with set value Ir of main pole.
umber of poles			4 pole
andard equipment			Screw connection
witching capacity			
400/415 V 50 Hz	I <sub>cu</sub>	kA	25
ated current = rated uninterrupted current			
Rated current = rated uninterrupted current	$I_n = I_u$	Α	300
Neutral conductor	% of phase conductor	%	60
Reduced neutral conductor protection		Α	200
Neutral conductor protection			Reduced neutral conductor protection
etting range			
Overload trip			
中	I <sub>r</sub>	Α	240 - 300
Main pole	I <sub>r</sub>	A	160 - 200
Short-circuit releases			
Non-delayed	$I_i = I_n x \dots$		1500 - 2490
Short-circuit releases	I <sub>rm</sub>	A	1500 - 2490

### **Technical data**

General

General			
Standards			IEC/EN 60947
Protection against direct contact			Finger and back of hand proof to VDE 0106 Part 100
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Ambient temperature, storage	o	°C	- 40 - + 70
Operation	o	°C	-25 - +70
Mechanical shock resistance (10 ms half-sinusoidal shock) according to IEC 60068-2-27	Q	g	20 (half-sinusoidal shock 20 ms)
Safe isolation to EN 61140			

Between auxiliary contacts and main contacts		V AC	500	
between the auxiliary contacts		V AC	300	
Weight		kg	3.5	
Mounting position			Vertical and 90° in all directions	Vith XFI earth-fault release: NZM1, N1, NZM2, N2: vertical and 0° in all directions vith plug-in unit NZM1, N1, NZM2, N2: vertical, 90° ight/left vith withdrawable unit: NZM3, N3: vertical, 90° right/left NZM4, N4: vertical vith remote operator: NZM2, N(S)2, NZM3, N(S)3, VZM4, N(S)4: vertical and 90° in all lirections
Direction of incoming supply			as required	
Degree of protection				
Device			In the operating controls area: IP20 (	basic degree of protection)
Enclosures			With insulating surround: IP40	
Terminations			With door coupling rotary handle: IPI Tunnel terminal: IP10	
			Phase isolator and strip terminal: IPC	00
Other technical data (sheet catalogue)			Temperature dependency, Derating	
Circuit-breakers				
Rated current = rated uninterrupted current	$I_n = I_u$	Α	300	
Rated surge voltage invariability	U <sub>imp</sub>			
Main contacts		V	8000	
Auxiliary contacts		V	6000	
Rated operational voltage	U <sub>e</sub>	V AC	440	
Overvoltage category/pollution degree			III/3	
Rated insulation voltage	$U_{i}$	V	690	
Use in unearthed supply systems		V	≦ 440	
Switching capacity				
Rated short-circuit making capacity	I <sub>cm</sub>			
240 V	I <sub>cm</sub>	kA	63	
400/415 V	I <sub>cm</sub>	kA	53	
440 V 50/60 Hz	I <sub>cm</sub>	kA	53	
Rated short-circuit breaking capacity I <sub>cn</sub>	I <sub>cn</sub>			
Icu to IEC/EN 60947 test cycle 0-t-C0	lcu	kA		
240 V 50/60 Hz	I <sub>cu</sub>	kA	30	
400/415 V 50/60 Hz	I <sub>cu</sub>	kA	25	
440 V 50/60 Hz		kA	25	
·	I <sub>cu</sub>		23	
Ics to IEC/EN 60947 test cycle 0-t-C0-t-C0	lcs	kA		
240 V 50/60 Hz	I <sub>cs</sub>	kA	30	
400/415 V 50/60 Hz	I <sub>cs</sub>	kA	25	
440 V 50/60 Hz	I <sub>cs</sub>	kA	18.5	
			Maximum back-up fuse, if the expect location exceed the switching capacitations.	ted short-circuit currents at the installation city of the circuit-breaker.
Utilization category to IEC/EN 60947-2			А	
Lifespan, mechanical(of which max. 50 % trip by shunt/undervoltage release)	Operations		20000	
Lifespan, electrical				
AC-1				
400 V 50/60 Hz	Operations		10000	
415 V 50/60 Hz	Operations		7500	
Max. operating frequency		Ops/h	120	
Total break time at short-circuit		ms	< 10	
Terminal capacity				
Standard equipment			Screw connection	
			Box terminal	

			connection on rear
Round copper conductor			
Box terminal			
Solid		mm <sup>2</sup>	1 x (10 - 16)
			2 x (6 - 16)
Stranded		mm <sup>2</sup>	1 x (25 - 185) 2 x (25 - 70)
Tunnel terminal			
Solid		$mm^2$	1 x 16
Stranded			
1-hole		mm <sup>2</sup>	1 x (25 - 185)
Bolt terminal and rear-side connection			
Direct on the switch			
Solid		mm <sup>2</sup>	1 x (10 - 16) 2 x (6 - 16)
Stranded		mm <sup>2</sup>	1 x (25 - 185) 2 x (25 - 70)
Al circular conductor			
Tunnel terminal			
Solid		mm <sup>2</sup>	1 x 16
Stranded			
Stranded		mm <sup>2</sup>	1 x (25 - 185)
Bolt terminal and rear-side connection			
Direct on the switch			
Solid		mm <sup>2</sup>	1 x (10 - 16) 2 x (10 - 16)
Stranded		mm <sup>2</sup>	1 x (25 - 50) 2 x (25 - 50)
Cu strip (number of segments x width x segment thickness)			
Box terminal			
	min.	mm	2 x 9 x 0.8
	max.	mm	10 x 16 x 0.8 (2x) 8 x 15.5 x 0,8
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	2 x 16 x 0.8
Flat copper strip, with holes	max.	mm	10 x 24 x 0.8
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M8
Direct on the switch			
	min.	mm	16 x 5
	max.	mm	24 x 8
Control cables			
		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	300
Equipment heat dissipation, current-dependent	$P_{vid}$	W	83.7
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.

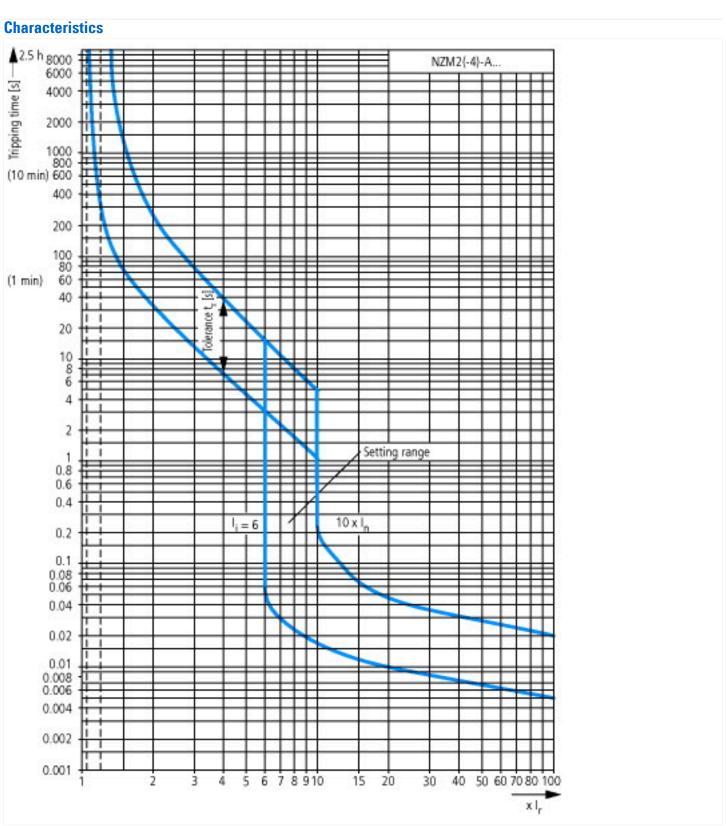
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects	Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation	Meets the product standard's requirements.
10.2.5 Lifting	Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact	Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions	Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES	Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances	Meets the product standard's requirements.
10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
10.8 Connections for external conductors	Is the panel builder's responsibility.
10.9 Insulation properties	
10.9.2 Power-frequency electric strength	Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material	Is the panel builder's responsibility.
10.10 Temperature rise	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

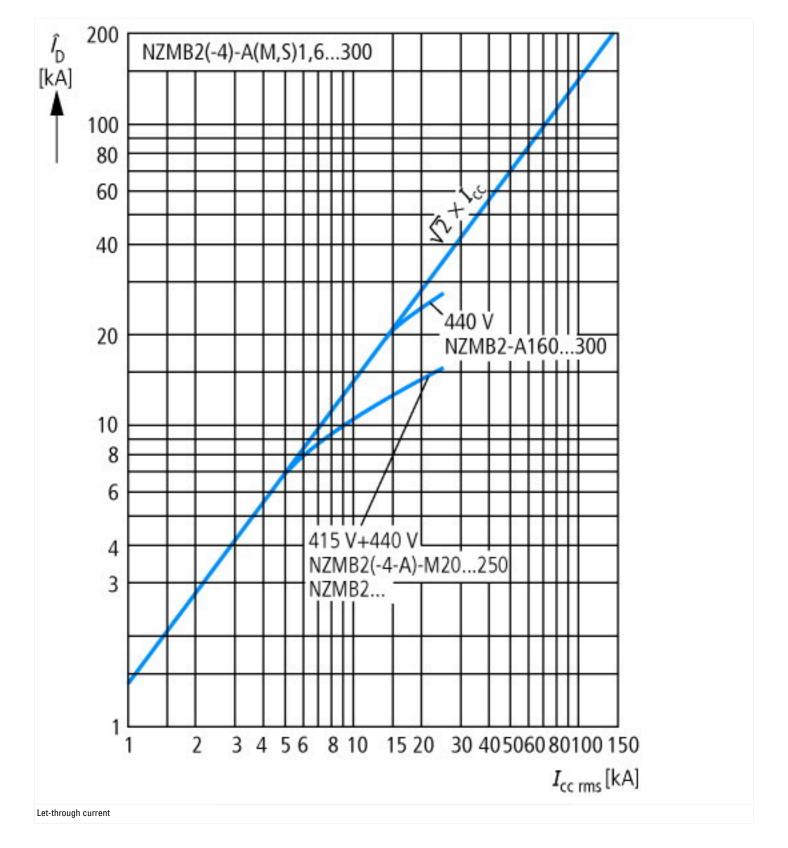
### **Technical data ETIM 7.0**

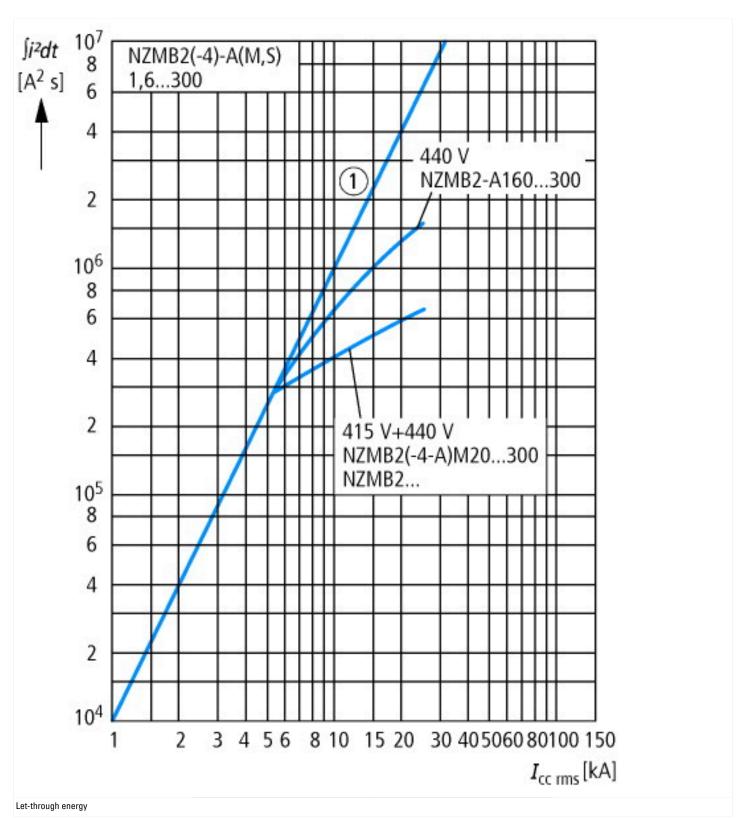
Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ec/@ss10.01-27-37-04-09 [A.17716013])

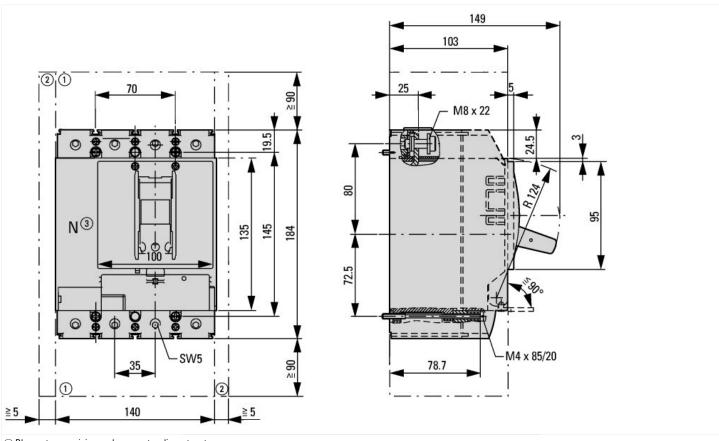
protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])		
Rated permanent current lu	А	300
Rated voltage	V	440 - 440
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	25
Overload release current setting	Α	240 - 300
Adjustment range short-term delayed short-circuit release	Α	0 - 0
Adjustment range undelayed short-circuit release	Α	5 - 8.3
Integrated earth fault protection		No
Type of electrical connection of main circuit		Screw connection
Device construction		Built-in device fixed built-in technique
Suitable for DIN rail (top hat rail) mounting		No
DIN rail (top hat rail) mounting optional		Yes
Number of auxiliary contacts as normally closed contact		0
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as change-over contact		0
With switched-off indicator		No
With under voltage release		No
Number of poles		4
Position of connection for main current circuit		Front side
Type of control element		Rocker lever
Complete device with protection unit		Yes
Motor drive integrated		No
Motor drive optional		Yes
Degree of protection (IP)		IP20

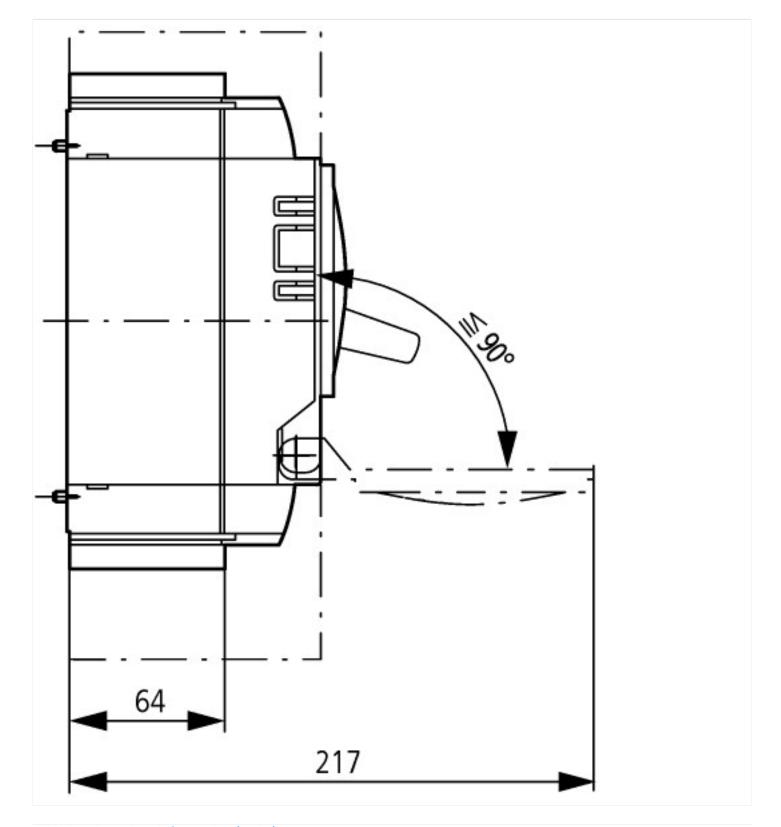






## **Dimensions**





# Additional product information (links)

Temperature dependency, Derating	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.172
CurveSelect characteristics program	http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/CharacteristicsProgram/index.htm
additional technical information for NZM power switch	https://es-assets.eaton.com/DOCUMENTATION/PDF/nzm_technic_de_en.pdf